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World Forum for Harmonization of Vehicle Regulations**Working Party on Passive Safety****Sixty-first session**

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Item 17 of the provisional agenda

Regulation No. 129 (Enhanced Child Restraint Systems)**Proposal for the 03 series of amendments as Phase 3 of
Regulation No. 129 (Enhanced Child Restraint Systems)****Submitted by the expert from France***

The text reproduced below was prepared by the expert from France. It introduces the 03 series of amendments to Regulation No. 129 (Enhanced Child Restraint Systems (ECRS)) that were agreed upon by the experts of the Informal Working Group on Child Restraint Systems (IWG CRS). The modifications to the existing text of the UN Regulation, including ECE/TRANS/WP.29/GRSP/2016/19, ECE/TRANS/WP.29/GRSP/2016/22, ECE/TRANS/WP.29/GRSP/2016/23 and Annex V to the report of the sixtieth session of the Working Party on Passive Safety (GRSP) (see ECE/TRANS/WP.29/GRSP/60, paras. 35 and 36), are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/254, para. 159 and ECE/TRANS/2016/28/Add.1, cluster 3.1), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.



I. Proposal

Paragraph 1., amend to read:

"1. Scope

This Regulation applies (in Phases 1 ~~and 2~~ **and 3**) to the following child restraint system for child occupants of power driven vehicles:

- (a) Integral Universal ISOFIX Enhanced Child Restraint Systems (i-Size);
- (b) Integral Specific vehicle ISOFIX Enhanced Child Restraint Systems;
- (c) ~~Non-integral Universal Enhanced Child Restraint Systems (i-Size booster seat);~~
- (d) ~~Non-integral sSpecific vehicle eEnhanced eChild rRestraint sSystems (sSpecific vehicle booster seat);~~
- (e) **Integral Universal Belted Enhanced Child Restraint Systems;**
- (f) **Integral Specific Belted Enhanced Child Restraint Systems."**

Insert new paragraph 2.3.2., to read:

"2.3.2. **"Universal" (Integral Universal Belted Enhanced Child Restraint System) is a category of Enhanced Child Restraint System primarily designed to be attached only by the adult safety seat belt in all Universal seating positions of a vehicle, as defined and approved according to Regulation No. 16."**

Paragraph 2.3.2. (*former*), renumber as paragraph 2.3.3. and amend to read:

"2.3.3. **"i-Size booster seat" (Non-Integral Universal Enhanced Child Restraint System) is a category of Enhanced Child Restraint Systems with integrated backrest and stowable ISOFIX ~~connectors~~ attachments if any, primarily designed for use in all i-Size seating positions of a vehicle."**

Paragraph 2.6., amend to read:

"2.6. **"Integral Universal ISOFIX ~~Universal~~" is an ISOFIX Enhanced Child Restraint System comprising either a top-tether or a support-leg, to limit the pitch rotation of the Enhanced Child Restraint System, attached to, or supported by, the corresponding vehicle."**

Insert new paragraph 2.7.3., to read:

"2.7.3. **"Specific vehicle Belted" is a category of Integral Enhanced Child Restraint System connecting to specific vehicle types. All vehicle anchorages are to be approved according to Regulation No. 14 or [XX]. It is also an indication for Enhanced Child Restraint Systems including dashboard as a vehicle contact zone."**

Paragraph 2.16., amend to read:

"2.16. **"CRF pitch angle" is the angle between the bottom surface of the fixture "ISO/F2 (~~B~~) as defined in Regulation No. 16 (Annex 17, Appendix 2, Figure 2) and the horizontal Z plane of the vehicle as defined in Regulation No. 14 (Annex 4, Appendix 2), or [XX] (Annex 3, Appendix 2), with the fixture installed in the vehicle as defined in Regulation No. 16 (Annex 17, Appendix 2)."**

Paragraph 2.17.1., amend to read:

- "2.17.1. "ISOFIX Vehicle seat fixture" means a fixture, according to ISOFIX size ~~classes envelopes~~ whose dimensions are given in Figures 1 to 7 of Appendix 2 to Annex 17 to Regulation No. 16, used by an Enhanced Child Restraint System manufacturer to determine the appropriate dimensions of **an Integral Universal Belted ECRS or** an ISOFIX Enhanced Child Restraint System and **including** the location of its ISOFIX attachments."

Insert new paragraph 2.51.3., to read:

- "2.51.3. "**Universal seating position**" means a location in accordance with **paragraph 8.2.2.5.2.(b) of Regulation No. 16.**"

Paragraphs 2.56.1. and 2.56.2., amend to read:

- "2.56.1. "Class A device" prevents the child from pulling the webbing of the retractor through to the lap part of the belt, when the adult belt is used to restrain the child directly (**Non-Integral ECRS**).
- 2.56.2. "Class B device" (~~to be used in phase III~~) allows the retention of an applied tension in the lap part of an adult safety belt, when the adult belt is used to restrain ~~the~~ **Integral** Enhanced Child Restraint System. The device intends to prevent the webbing from slipping from the retractor through the device, which would release the tension and place the restraint in a non-optimal position."

Paragraph 2.57., amend to read:

- "2.57. "Module", is a part of an ECRS that is separate from the ISOFIX ~~attachments connectors~~ and is in direct contact with the child. A module can be used whether or not as a stand-alone to restrain a child in a car. A base is allowed to accept more than one module (Module A, Module B, etc.)."

Paragraph 3.2.2., amend to read:

- "3.2.2. The applicant shall indicate the kind of application:
- (a) Application for an i-Size Enhanced Child Restraint Systems; or
 - (b) Application for a specific vehicle ISOFIX; or
 - (c) Application for a i-Size booster seat Enhanced Child Restraint System; or
 - (d) Application for a specific vehicle booster seat Enhanced Child Restraint System; **or**
 - (e) **Application for a Universal Enhanced Child Restraint Systems; or**
 - (f) **Application for Specific vehicle belted Enhanced Child Restraint Systems; or**
 - (g) Or any combination of (a),(b),~~(c) and (d)~~**[(c), (d), (e) and (f)]** as long as they fulfil paragraph 5.4.2.2.and 6.1.3.3."

Paragraph 4.3., amend to read:

- "4.3. The following information shall be clearly indicated on the product:
- (a) The orientation of the Enhanced Child Restraint System relative to the vehicle;

- (b) The size range(s) of the Enhanced Child Restraint System in centimetres;
- (c) The maximum occupant mass allowed for the Integral Enhanced Child Restraint System in kilograms.

~~If the Enhanced Child Restraint System is to be used in combination with an adult safety belt, the correct webbing path shall be clearly indicated by means of a drawing permanently attached to the Enhanced Child Restraint System. If the restraint is held in place by the adult safety belt, the webbing paths shall be clearly marked on the product by colour coding. The colours used for the path of the safety belt when the device is installed in the forward facing position shall be red and when installed in the rearward facing shall be blue. The same colours shall also be used on the labels on the device that illustrate the methods of use.~~

~~There shall be a clear differentiation between the intended paths for the lap section and the diagonal section of the safety belt. Indication such as colour coding, words, shapes, etc. shall distinguish between sections of the safety belt.~~

~~The marking defined in this paragraph shall be visible with the Enhanced Child Restraint System in the vehicle, with the child in the Enhanced Child Restraint System."~~

Insert new paragraphs 4.6. to 4.6.2., to read:

"4.6. Webbing path.

The markings defined in this paragraph shall be visible on the Enhanced Child Restraint System in the vehicle, with the child in the Enhanced Child Restraint System.

There shall be a clear differentiation between the intended paths for the lap section and the diagonal section of the safety belt. Indication such as colour coding, words, shapes, etc. shall distinguish between sections of the safety belt.

4.6.1. For Non-Integral Enhanced Child Restraint System to be used in combination with an adult safety-belt to restrain the child, the correct webbing path [according to paragraph 6.1.2.5.] shall be clearly marked on the product, and indicated by means of a drawing permanently fixed to the Enhanced Child Restraint System.

4.6.2. For Integral Belted Enhanced Child Restraint System held in place by the adult safety-belt, the webbing paths [according to paragraph 6.1.2.5.] shall be clearly marked on the product, and indicated by means of a drawing permanently attached to the Enhanced Child Restraint System."

Paragraphs 4.6. to 4.7.2.(former), renumber as paragraphs 4.7. to 4.8.2.

Paragraph 4.7.3., renumber as paragraph 4.8.3. and amend to read:

"4.78.3. An impact shield that is not permanently attached to the seat is considered as a module and shall have a permanently attached label an international module mark as defined in paragraph 5.4.3. This marking shall be permanently attached to the module part of the ECRS to indicate the make and model of the ECRS to which it belongs. The minimum size of the label shall be 40 x 40 mm."

Insert new paragraphs 4.9. to 4.9.4., to read:

"4.9. Marking for integral belted ECRS.

The marking shall be located on the part of the ECRS which includes the main load-bearing contact points.

One of the following information labels shall be permanently visible to the person installing the Enhanced Child Restraint System in a vehicle:

- 4.9.1. Universal belted Enhanced Child Restraint Systems shall have a permanently attached label with the following information visible to the person installing the Enhanced Child Restraint System in the car:**

Universal 

- 4.9.2. Specific vehicle belted Enhanced Child Restraint System (including built-in systems) shall have a permanently attached label with the following information visible to the person installing the Enhanced Child Restraint System in the car:**

Specific vehicle belted 

- 4.9.3. An international approval mark as defined in paragraph 5.4.1. In case the ECRS containing module(s) this marking shall be permanently attached to the part of the ECRS that includes the main load-bearing contact points.**

- 4.9.4. An international module mark as defined in paragraph 5.4.3. In case the ECRS containing module(s) this marking shall be permanently attached to the module part of the ECRS."**

Paragraph 4.8. (former), renumber as paragraph 4.10.

Paragraph 5.4.2.1., amend to read:

- "5.4.2.1. The words "i-Size universal ISOFIX", or "i-Size booster seat", or "specific vehicle ISOFIX" or "specific vehicle booster seat" or "**Universal (belted)**", or "**Specific vehicle (belted)**", depending on the category of Enhanced Child Restraint System;"**

Paragraph 5.4.3.1., amend to read:

- "5.4.3.1. The words "R129" followed by a dash and the same approval number as the part of the ECRS which includes the ISOFIX attachments or **main load bearing contact points**;"**

Insert new paragraphs 6.1.2.3. to 6.1.2.6., to read:

- "6.1.2.3. For the "Universal" category; this shall be by means of the adult safety seat belt.**

- 6.1.2.4. For the "Specific vehicle Belted" category; this shall be by means of the adult safety seat belt.**

6.1.2.5. Integral Enhanced Child Restraint Systems of the belted categories shall have a main load-bearing contact point, between the Enhanced Child Restraint System and the adult safety belt. This point shall not be less than 150 mm from the Cr axis when measured with the Enhanced Child Restraint System on the dynamic test bench installed in accordance with paragraph 7.1.3.5.2.3. of this Regulation, without a dummy. This shall apply to all adjustment setups and variable belt paths.

Table 1

Possible configurations for type approval for Integral Enhanced Child Restraint Systems

	<i>Orientation</i>	<i>Category</i>			
		i-Size ECRS	Integral Specific Vehicle ISOFIX ECRS	Universal (belted)	Specific vehicle Belted
INTEGRAL	Lateral facing (Carry-cot)	NA	A	NA	A
	Rearward facing	A	A	A	A
	Forward facing (integral)	A	A	A	A

Note:

ECRS: Enhanced Child Restraint System

A: Applicable

NA: Non-Applicable

6.1.2.6. The adult seat belt required to secure a belted Integral Enhanced Child Restraint System on the dynamic test bench is defined in Annex 23 to this Regulation. The Enhanced Child Restraint System shall be secured onto the test bench using the appropriate standard seat belt described in Annex 23 using a preload tension of 50N ± 5N. The dummy shall not be installed unless the design of the restraint is such that the installation of a dummy would increase the length of belt used. With the Enhanced Child Restraint System in the installed position, there shall be no additional tension in the belt, apart from that exerted by the standard retractor (4 ± 3 N), where fitted. Where the retractor belt is used, this condition shall be met with at least 150 mm of belt remaining on the spool.

A clamping mechanism used according to paragraph 7.1.3.5.2.3. shall not influence the belt path."

Paragraph 6.1.2.3.(former), renumber as paragraph 6.1.2.7.

Paragraph 6.1.3.4., amend to read:

- "6.1.3.4. Enhanced Child Restraint Systems of the i-Size booster seat category~~ies~~ shall have a main load-bearing contact point, between the Enhanced Child Restraint System and the adult safety belt. This point shall not be less than 150 mm from the Cr axis when measured with the Enhanced Child Restraint System on the dynamic test bench installed in accordance with paragraph 7.1.3.5.2.2. of this Regulation, without a dummy. This shall apply to all adjustment ~~configuration setups~~ and variable belt paths."

Paragraph 6.2.1.10., amend to read:

- "6.2.1.10. At least the worst case ~~configuration~~ of the dynamic test for the Enhanced Child Restraint System shall be performed after conditioning according to paragraph 7.2.6."

Paragraph 6.2.3., amend to read:

- "6.2.3. It shall not be possible to remove or detach without the use of specific tools, any components not designed to be removable or detachable **for maintenance or change of configuration purpose**. Any components that are designed to be removable ~~or detachable for maintenance or adjustment purpose~~ shall be so designed as to avoid any risk of incorrect assembly and use, as the assembly and disassembly processes shall be explained in detail in the restraint user guides. **For integral Enhanced Child Restraint Systems** Any harness belt ~~or impact shield~~ shall be capable of its full range of adjustment without disassembly,"

Paragraph 6.3.2.2.1., amend to read:

- "6.3.2.2.1. Integral Class Enhanced Child Restraint Systems

....

i-Size booster seats shall be adjusted to accommodate children of 135 cm stature (height, depth and width dimensions as defined in Annex 18) or to the largest size of its declared stature range in case the upper limit is below 135 cm. In this case, it must fit within each of its declared Vehicle Seat Fixtures in at least one adjustable position. The Enhanced Child Restraint System may be adjusted to other inclined positions (less or more reclined) that are outside the Vehicle Seat Fixture's height; in this case, the child restraint manufacturer's user manual shall clearly indicate that when used in one of these ~~configuration~~ **arrangements**, the Enhanced Child Restraint System may not fit in all vehicles approved for a Universal fixture."

Paragraph 6.6.4.1.2., amend to read:

- "6.6.4.1.2. Enhanced Child Restraint Systems of the specific vehicle categories shall be assessed for fit with each vehicle model for which the Enhanced Child Restraint System is intended. The Technical Service responsible for conducting the test may reduce the number of vehicle ~~configurations~~ **arrangements** tested if they do not differ greatly in the aspects listed in paragraph 6.6.4.1.2.3. of this Regulation. This Enhanced Child Restraint System shall be dynamically tested in one of the following ways:"

Paragraph 6.6.4.4.1.2.1., amend to read:

"6.6.4.4.1.2.1.

...

Where a test is conducted in accordance with paragraph 6.6.4.1.6.2. above, only the second ~~configuration~~ **test results** without 100 mm diameter bar will be considered."

Insert new paragraphs 6.7.6. to 6.7.6.5., to read:

6.7.6. Lock-off device

6.7.6.1. The lock-off device shall be permanently attached to the child restraint.

6.7.6.2. The lock-off device shall not impair the durability of the adult belt and shall undergo the temperature test operation requirements given in paragraph 7.2.7.1.

6.7.6.3. The lock-off device shall not prevent the rapid release of the child.

6.7.6.4. Class A device

The amount of slip of the webbing shall not exceed 25 mm after the test prescribed in paragraph 7.2.9.1. below.

6.7.6.5. Class B device

The amount of slip of the webbing shall not exceed 25 mm after the test prescribed in paragraph 7.2.9.2. below."

Paragraph 7.1.2.7., amend to read:

"7.1.2.7. These tests shall be carried out using both the smallest and the largest appropriate dummy of the size range for which the restraining device is intended. Any adjustment of the dummy or Enhanced ~~child~~ **Child restraint** ~~Restraint systems~~ **Systems** during the complete test cycle is not allowed."

Paragraph 7.1.3., amend to read:

"7.1.3. ...

(e) The lateral dynamic test(s) will be performed in this(ese) ~~configuration~~ **arrangement(s)**;

..."

Insert new paragraph 7.1.3.5.2.3., to read:

7.1.3.5.2.3. Installation of an Integral Enhanced Child Restraint Systems "Universal" belted seat or specific vehicle belted seat on the test bench.

The unoccupied belted ECRS shall be placed on the test bench.

Fit load cell 1 to the outboard position as shown Figure 1. Install the Enhanced Child Restraint System in the correct position. If a lock-off device is fitted to the Enhanced Child Restraint System and acts upon the diagonal belt, place load cell 2 at a convenient position behind the Enhanced Child Restraint System between the lock-off device and the buckle as shown above. If no lock-off device is fitted or if the lock-off device is fitted at the buckle, position the load cell at a convenient position between the pillar loop and the Enhanced Child Restraint System.

Adjust the lap portion of the reference belt to achieve a tension load of $50 \text{ N} \pm 5 \text{ N}$ at load cell 1. Make a chalk mark on the webbing where it passes through the simulated buckle.

While maintaining the belt at this position, adjust the diagonal to achieve a tension of $50 \text{ N} \pm 5 \text{ N}$ at load cell 2 by either locking the webbing at the Enhanced Child Restraint System webbing locker or by pulling the belt between the belt clamping mechanism and the standard retractor. If the tension in load cell 2 is achieved by pulling the belt between the clamping mechanism and the retractor, the clamping mechanism shall now be locked.

Extract all webbing from the retractor spool and rewind the excess webbing keeping a tension of $4 \pm 3 \text{ N}$ in the belt between the retractor and the pillar loop. The spool shall be locked before the dynamic test.

The dummy shall be placed in the Enhanced Child Restraint System separate from the seat-back of the chair by a flexible spacer. The spacer shall be 2.5 cm thick and 6 cm wide. It shall have length equal to the shoulder height less the thigh height, both in the sitting position and relevant to the dummy size being tested. The resulting height of the spacer is listed in the table below for the different dummy sizes. The board should follow as closely as possible the curvature of the seat and its lower end should be at the height of the dummy's hip joint.

	<i>Q0</i>	<i>Q1</i>	<i>Q1.5</i>	<i>Q3</i>	<i>Q6</i>	<i>Q10</i> (design targets)
	Dimensions in mm					
Height of spacer device for positioning of dummy	173 ± 2	229 ± 2	237 ± 2	250 ± 2	270 ± 2	359 ± 2

Adjust the ECERS belt in accordance with the manufacturer's instructions, but to a tension of $250 \pm 25 \text{ N}$ above the adjuster force, with a deflection angle of the strap at the adjuster of $45 \pm 5^\circ$, or alternatively, the angle prescribed by the manufacturer.

The spacer shall then be removed and the dummy pushed towards to the seat back. Distribute the slack evenly throughout the harness."

Paragraph 7.1.3.5.2.3.(former), renumber as paragraph 7.1.3.5.2.4.

Paragraph 7.2.3.2., amend to read:

"7.2.3.2. The free end of the strap shall be arranged in the same ~~configuration-way~~ as when the device is in use in the vehicle, and shall not be attached to any other part."

Paragraph 7.2.5.2.6.2., amend to read:

"7.2.5.2.6.2. The table below sets out the general conditions for each test:

Table 8

	Load (N)	Cycles per minute	Cycles (No.)
Type 1 procedure	40 60 ± 0.15	30 ± 10	1 000 ± 5
Type 2 procedure	5 10 ± 0.051	30 ± 10	5 000 ± 5

Where there is insufficient strap to test over 300 mm of shift, the test may be applied over a shorter length subject to a minimum of 100 mm. The dynamic tests shall be conducted with the largest dummy and the smallest dummy as defined in the following tables according to the size range indicated by the manufacturer for the Enhanced Child Restraint System."

Paragraphs 7.2.5.2.6.3. to 7.2.5.2.6.3.2., amend to read:

"7.2.5.2.6.3. Particular test conditions

7.2.5.2.6.3.1. ~~Type 1 procedure: for cases where the strap slides through the quick adjusting device. The 10 N load shall be vertically and permanently applied on one of the straps. The other strap, set horizontally, shall be attached to a device, giving the webbing a back and forth motion. The adjusting device shall be so placed that the horizontal strap of the webbing remains under tension (see Annex 5, figure 1).~~ **Type 1 procedure: for cases where the strap slides through the quick adjusting device. Apply a load of 10 N, if necessary the load may be increased by 10 N steps so as to permit correct sliding, but limited to a maximum of 60 N. This load shall be vertically and permanently applied on the straps. The part of the strap set horizontally shall pass through the quick adjuster it is fitted to and shall be attached to a device, giving the webbing a back and forth motion. The quick adjusting device shall be so placed that the horizontal strap of the webbing remains under tension (see Annex 5, Figure 1). Activate the quick adjuster while pulling the straps in the direction to slacken the harness and deactivate it while pulling the straps in the direction to tighten the harness.**

7.2.5.2.6.3.2. **Type 2 procedure: for cases where the strap changes direction in passing through a rigid part. During this test, the webbing shall pass through the rigid part it is intended for and the test set up shall reproduce the angles as in the real installation (in three dimensions), see Annex 5, Figure 2 for examples. The 10 N load shall be permanently applied. For cases where the strap changes direction more than once in passing through a rigid part, the load of 10 N may be increased by 10 N steps so as to permit correct sliding and achieve the prescribed 300 mm of strap movement through that rigid part.**

~~Type 2 procedure: for cases where the strap changes direction in passing through a rigid part. During this test, the angles of both webbing straps shall be as shown in Annex 5, figure 2. The 5 N load shall be permanently applied. For cases where the strap changes direction more than once in passing through a rigid part, the load of 5 N may be increased so as to achieve the prescribed 300 mm of strap movement through that rigid part. "~~

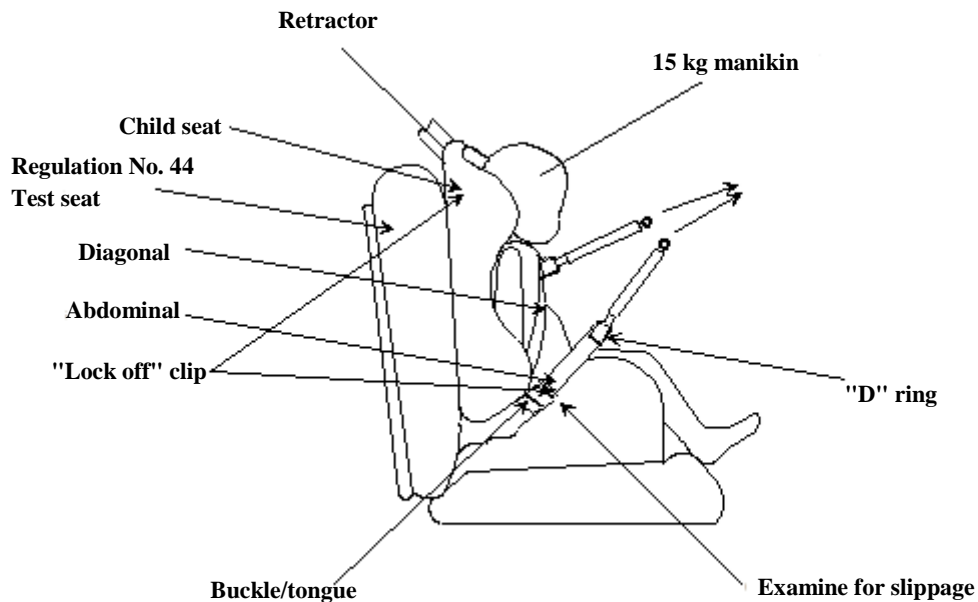
Insert new paragraphs 7.2.9. to 7.2.9.2., to read:

"7.2.9. Lock-off devices

7.2.9.1. Class A devices

The child restraint and the largest manikin for which the child restraint is intended shall be set up as shown in Figure 4 below. The webbing used shall be as specified in Annex 23 to this Regulation. The lock-off shall be fully applied and a mark made on the belt where the belt enters the lock-off. The force gauges shall be attached to the belt via a D ring, and a force equal to twice (± 5 per cent) the mass of the heaviest dummy of group I shall be applied for at least one second. The lower position shall be used for lock-offs in position A and the upper position for lock-offs in position B. The force shall be applied for a further 9 times. A further mark shall be made on the belt where it enters the lock-off and the distance between the two marks shall be measured. During this test, the retractor shall be unlocked.

Figure 4



7.2.9.2. Class B devices.

The child restraint shall be firmly secured, and the webbing as specified in Annex 23 to this Regulation, shall be passed through the lock-off and frame following the routing described in the manufacturer's instructions. The belt shall pass through the testing equipment as described in Figure 5 below and be attached to a mass of 5.25 ± 0.05 kg. There shall be 650 ± 40 mm of free webbing between the mass and the point where the webbing leaves the frame. The lock-off shall be fully applied and a mark made on the belt where it enters the lock-off. The mass shall be raised and released so that it falls freely over a distance of 25 ± 1 mm. This shall be repeated 100 times ± 2 at a frequency of 60 ± 2 cycles per minute, to simulate the jerking action of a child restraint in a car. A further mark shall be made on the belt where it enters the lock-off and the distance between the two marks shall be measured.

The lock-off device shall cover the full width of the webbing in the installed condition with 15 kg dummy installed. This test is to be conducted using the same webbing angles as those formed in normal use. The free end of the lap belt portion shall be fixed. The test shall be conducted with the child restraint system firmly attached to the test bench used in the overturning or dynamic test. The loading strap can be attached to the simulated buckle."

Insert new paragraph 14.2.3., to read:

"14.2.3. For Universal belted seat category Enhanced Child Restraint Systems the following label shall be clearly visible on the exterior of the packing:

Notice:

This is an Universal belted Enhanced Child Restraint System. It is approved according to Regulation No.129, for use primarily in "Universal seating positions" as indicated by vehicle manufacturers in the vehicle users' manual.

If in doubt, consult either the Enhanced Child Restraint System manufacturer or the retailer.

"

Paragraphs 14.2.3. to 14.2.9. (former), renumber as paragraphs 14.2.4. to 14.2.10.

Insert new paragraphs 16.8. to 16.10., to read:

"16.8. As from the official date of entry into force of the 03 series of amendments to this Regulation, no Contracting Party applying this Regulation shall refuse to grant or refuse to accept type approvals to this Regulation as amended by the 03 series of amendments.

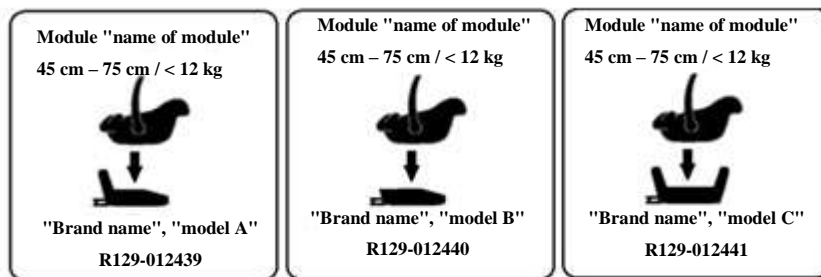
16.9. Until 1 September 2020, type approvals to the preceding series of amendments to the Regulation which are not affected by the 03 series of amendments to the Regulation shall remain valid and Contracting Parties applying this Regulation shall continue to accept them.

16.10. Until 1 September 2022, Contracting Parties applying this Regulation shall not refuse to grant extensions of approval to the 01 and 02 series of amendments to this Regulation."

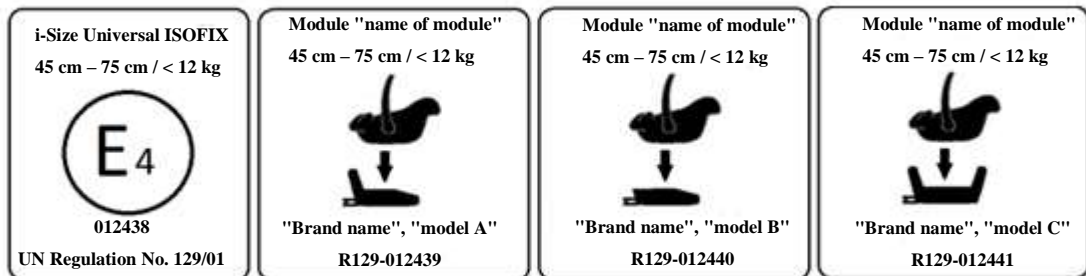
Annex 2, amend to read:

"Annex 2

1. Arrangements of the approval mark
...
2. Arrangements of the approval mark in combination with a module mark
...
- 2.1. Arrangements of the module mark in combination with an approval mark
- 2.1.1. **Where a module is approved for use with more than one base, the individual base and module combinations are to be indicated on the module in separate module marks and each shall bear their applicable size ranges.**



An Enhanced Child Restraint System that bears an approval mark for the stand-alone configuration of use and a module mark for the use on three different bases thus carries the following arrangement of approval and module marks:



An Enhanced Child Restraint System bearing the above marks is capable of being used with a vehicle belt for the 45 cm - 75 cm size range and mass limit of 12 kg; it is approved under the number 001440.

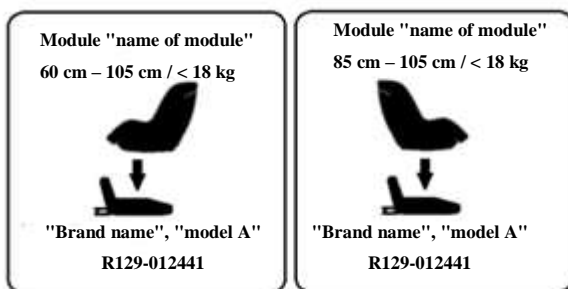
The Enhanced Child Restraint System is also to be used as a module in combination with the base 'brand name & model A', for the 45 cm - 75 cm size range and mass limit of 12 kg; approved according to Regulation No. 129 under the number 012439.

The Enhanced Child Restraint System is also to be used as a module in combination with the base 'brand name & model B', for the 45 cm - 75 cm size range and mass limit of 12 kg; approved according to Regulation No. 129-01 under the number 012440.

The Enhanced Child Restraint System is also to be used as a module in combination with the base "brand name and model C", for the 45 cm - 75 cm size range and mass limit of 12 kg; approved according to Regulation No. 129-01 under the number 012441.

The approval numbers indicate that the approval was granted in accordance with the requirements of the Regulation concerning the approval of Enhanced Child Restraint Systems used on board of motor vehicles as amended by the 01 series of amendments.

- 2.1.2. Where a module requires conversion of the product in order to transform from one transport configuration to the other, this shall be indicated in separate module marks, each bearing their applicable size ranges.

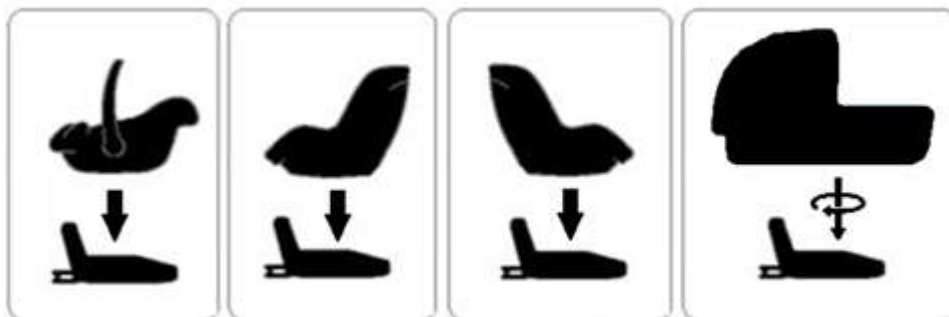


The Enhanced Child Restraint System bearing the above marks is capable of being used in a rearward facing configuration with the base "brand name & model A", for the 60 cm - 105 cm size range and with a mass limit of 18 kg; approved according to Regulation No. 129 under the number 012441.

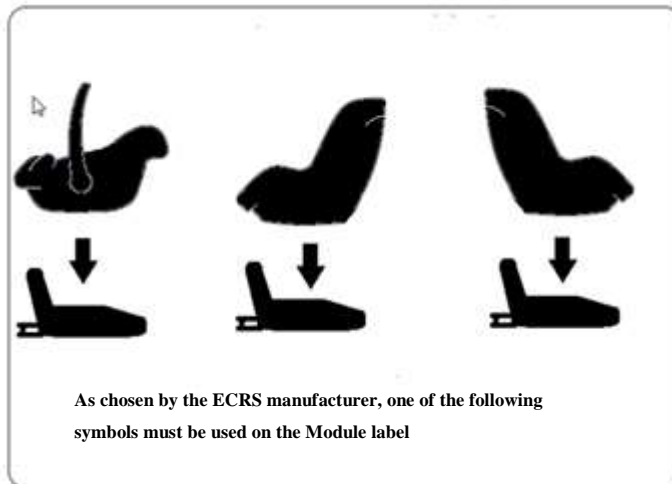
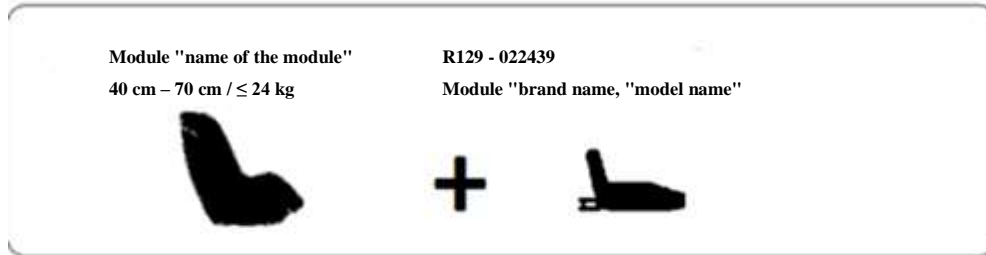
The Enhanced Child Restraint System bearing the above marks is also capable of being used in a forward facing configuration with the base "brand name and model A", for the 85 cm - 105 cm size range and with a mass limit of 18 kg; approved according to Regulation No. 129 under the same number 012441.

The approval number indicates that the approval was granted in accordance with the requirements of the Regulation on the approval of Enhanced Child Restraint Systems used on-board motor vehicles as amended by the 01 series of amendments.

At the choice of the ECRS manufacturer, one of the following symbols must be used on the module mark.



2.2 Examples of the symbols to be used on the module mark are given in the figures below.



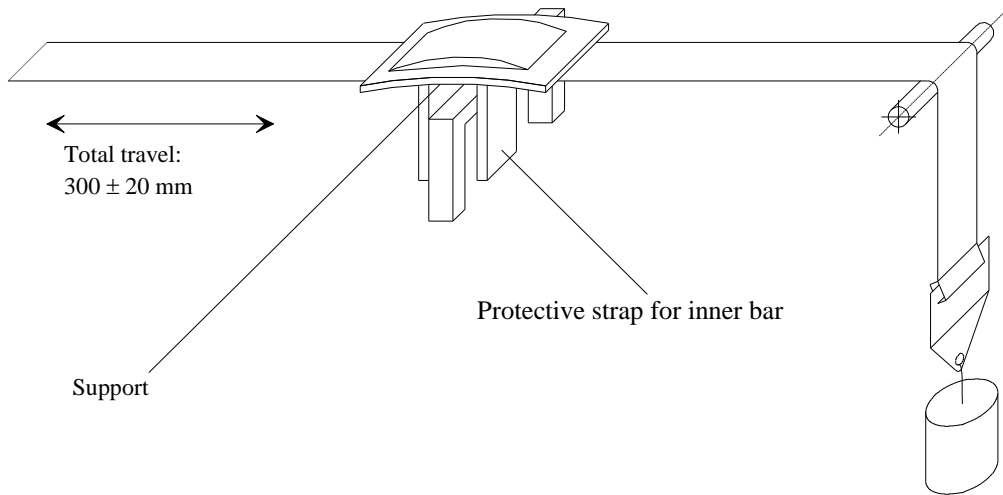
The Enhanced Child Restraint System module bearing the above module mark capable of being used for the 40 cm – 70 cm size range and mass limit of 24 kg; it is approved under the number 022439 to be used in combination with device approved according to Regulation No. 129 under the same number 022439. The approval number indicates that the approval was granted in accordance with the requirements of the Regulation concerning the approval of Enhanced Child Restraint Systems used on board of motor vehicles as amended by the 02 series of amendments."

Annex 5, Figures 1 and 2, amend to read:

"Annex 5

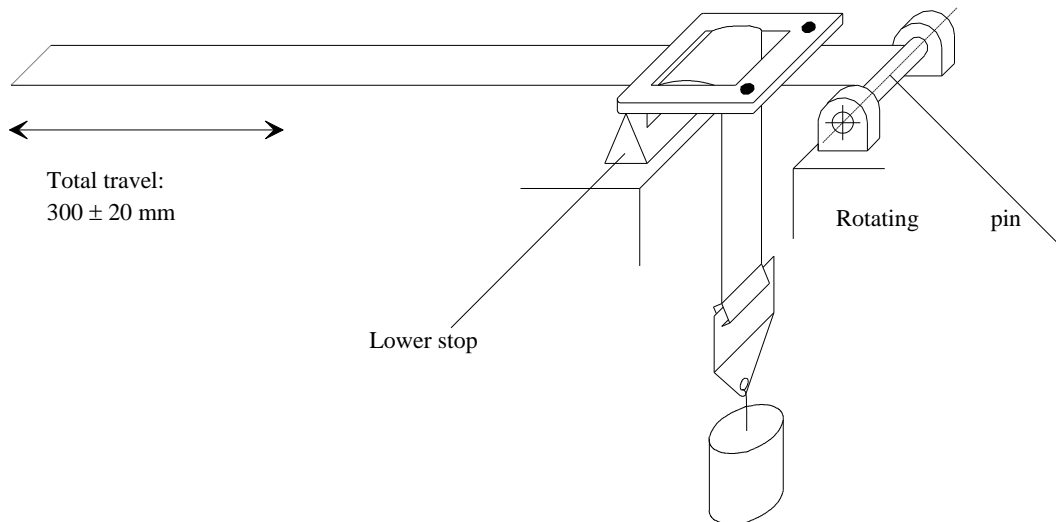
Abrasion and microslip test

Figure 1
Procedure type 1



F = 10 ± 0.1 N, can be increased up to F = 60 ± 0.5 N

Example a



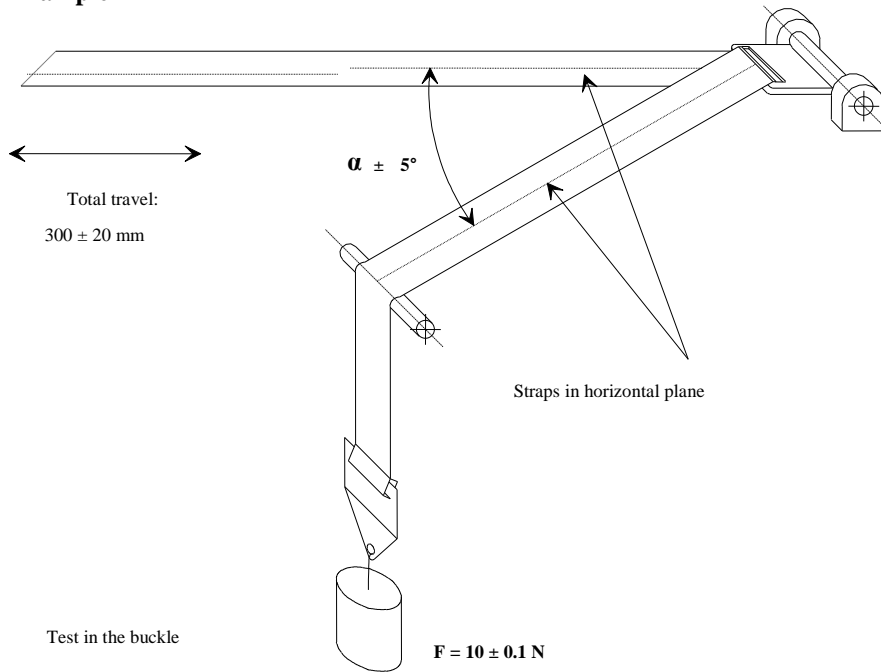
Example b

Examples of test arrangements corresponding to the type of adjusting device

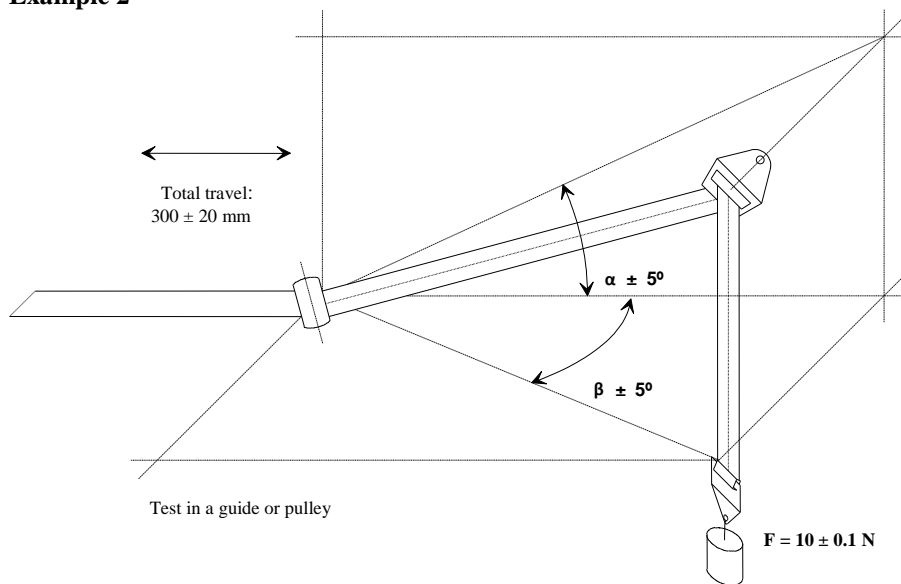
F = 10 ± 0.1 N, can be increased up to F = 60 ± 0.5 N

Figure 2
Procedure type 2
 Following two examples of test set up

Example 1



Example 2



Where α and β reproduce the angles as in the real installation (in three dimensions)
 ..."

Annex 12, paragraph 2.2.1.4., Notes, amend to read:

"Notes:

MH means harder ~~configuration~~ **condition** (the least good results obtained in approval or extension of approval)

LH signifies a less hard ~~configuration~~ **condition.**"

Annex 23, amend to read:

"1. The safety-belt for the dynamic test and for the maximum length requirements shall be made according to the ~~configuration~~ **definition** shown in Figure 1. These are a three-point retracting belt system.

..."

II. Justification

1. The proposed amendment includes Enhanced Child Restraint Systems from the universal belted or specific to vehicle belted categories into the scope of UN Regulation No. 129. This represents Phase 3 of the UN Regulation.

2. The text includes all modifications proposed by GRSP up to and including its sixtieth session (13-16 December 2016) as well as those of the Informal Working Group on Child Restraint Systems up to and including its sixty-third session (Brussels, 25th January 2017).

3. This proposal refers to the original text of Regulation No. 129, including the following amendments:

- Corrigendum 1 to the original version of the Regulation - Date of entry into force: 9 July 2013;
- Supplement 1 to the original version of the Regulation - Date of entry into force: 26 January 2014;
- Supplement 2 to the original version of the Regulation - Date of entry into force: 10 June 2014;
- Supplement 3 to the original version of the Regulation - Date of entry into force: 9 October 2014;
- Supplement 4 to the original version of the Regulation - Date of entry into force: 8 October 2015;
- Proposal for the 01 series of amendments - Date of entry into force: 9 February 2017;
- Proposal for Supplement 1 to the 01 series of amendments - Date of entry into force: [22 June 2017];
- Proposal for the 02 series of amendments - Date of entry into force: [22 June 2017];
- Proposal for Supplement 1 to the 02 series of amendments - ECE/TRANS/WP.29/GRSP/2016/19 and ECE/TRANS/WP.29/GRSP/2016/23 amended by GRSP-60-08-Rev.1;
- Proposal for Supplement 2 to the 01 series of amendments ECE/TRANS/WP.29/GRSP/2016/22 amended by GRSP-60-09-Rev.2.